Amendments to the Claims

Claims 1-23 (cancelled)

Claim 24 (new): A composition, comprising cDNA of which at least 34% is full length, produced by a process comprising

mixing an mRNA template with a retroviral reverse transcriptase having DNA polymerase activity, wherein said reverse transcriptase allows the mRNA template to remain intact during a one minute cDNA synthesis reaction as determined by gel electrophoresis; and

incubating said mixture under conditions sufficient to make said cDNA complementary to said mRNA template.

Claim 25 (new): The composition of claim 24, wherein said reverse transcriptase is modified within the RNase H domain.

Claim 26 (new): The composition of claim 24, wherein said reverse transcriptase is encoded by a modified nucleotide sequence that encodes a modified amino acid sequence modified in the region corresponding to amino acids 498-611 of M-MLV reverse transcriptase.

Claim 27 (new): The composition of claim 24, wherein said reverse transcriptase is encoded by a modified nucleotide sequence that encodes a modified amino acid sequence

modified in the region corresponding to amino acids 503-611 of M-MLV reverse transcriptase.

Claim 28 (new): The composition of claim 24, wherein said reverse transcriptase allows the mRNA template to remain intact during a 5 minute cDNA synthesis reaction as determined by gel electrophoresis.

Claim 29 (new): The composition of claim 24, wherein said reverse transcriptase allows the mRNA template to remain intact during a 10 minute cDNA synthesis reaction as determined by gel electrophoresis.

Claim 30 (new): The composition of claim 24, wherein said reverse transcriptase allows the mRNA template to remain intact during a 30 minute cDNA synthesis reaction as determined by gel electrophoresis.

Claim 31 (new): The composition of claim 24, wherein said reverse transcriptase allows the mRNA template to remain intact during a 60 minute cDNA synthesis reaction as determined by gel electrophoresis.

Claim 32 (new): A composition, comprising cDNA of which at least 34% is full length, produced by a process comprising

mixing an mRNA template with an M-MLV reverse transcriptase having DNA polymerase activity, wherein said reverse transcriptase allows the mRNA template to remain intact during a one minute cDNA synthesis reaction as determined by gel electrophoresis; and

incubating said mixture under conditions sufficient to make said cDNA complementary to said mRNA template.

Claim 33 (new): The composition of claim 32, wherein said reverse transcriptase is modified within the RNase H domain.

Claim 34 (new): The composition of claim 32, wherein said reverse transcriptase is encoded by a modified nucleotide sequence that encodes a modified amino acid sequence modified in the region corresponding to amino acids 498-611 of M-MLV reverse transcriptase.

Claim 35 (new): The composition of claim 32, wherein said reverse transcriptase is encoded by a modified nucleotide sequence that encodes a modified amino acid sequence modified in the region corresponding to amino acids 503-611 of M-MLV reverse transcriptase.

Claim 36 (new): The composition of claim 32, wherein said reverse transcriptase allows the mRNA template to remain intact during a 5 minute cDNA synthesis reaction as determined by gel electrophoresis.

Claim 37 (new): The composition of claim 32, wherein said reverse transcriptase allows the mRNA template to remain intact during a 10 minute cDNA synthesis reaction as determined by gel electrophoresis.

Claim 38 (new): The composition of claim 32, wherein said reverse transcriptase allows the mRNA template to remain intact during a 30 minute cDNA synthesis reaction as determined by gel electrophoresis.

Claim 39 (new): The composition of claim 32, wherein said reverse transcriptase allows the mRNA template to remain intact during a 60 minute cDNA synthesis reaction as determined by gel electrophoresis.

Claim 40 (new): A composition, comprising cDNA of which at least 34% is full length, produced by a process comprising

mixing an mRNA template with a retroviral reverse transcriptase having DNA polymerase activity, wherein said reverse transcriptase has no detectable RNase H activity as determined by examining by gel electrophoresis the integrity of an mRNA template during a one minute cDNA synthesis reaction; and

incubating said mixture under conditions sufficient to make said cDNA complementary to said mRNA template.

Claim 41 (new): The composition of claim 40, wherein said reverse transcriptase is modified within the RNase H domain.

Claim 42 (new): The composition of claim 40, wherein said reverse transcriptase is encoded by a modified nucleotide sequence that encodes a modified amino acid sequence modified in the region corresponding to amino acids 498-611 of M-MLV reverse transcriptase.

Claim 43 (new): The composition of claim 40, wherein said reverse transcriptase is encoded by a modified nucleotide sequence that encodes a modified amino acid sequence modified in the region corresponding to amino acids 503-611 of M-MLV reverse transcriptase.

Claim 44 (new): The composition of claim 40, wherein said no detectable RNase H activity is determined by examining by gel electrophoresis the integrity of an mRNA template during a 5 minute cDNA synthesis reaction.

Claim 45 (new): The composition of claim 40, wherein said no detectable RNase H activity is determined by examining by gel electrophoresis the integrity of an mRNA template during a 10 minute cDNA synthesis reaction.

Claim 46 (new): The composition of claim 40, wherein said no detectable RNase H activity is determined by examining by gel electrophoresis the integrity of an mRNA template during a 30 minute cDNA synthesis reaction.

Claim 47 (new): The composition of claim 40, wherein said no detectable RNase H activity is determined by examining by gel electrophoresis the integrity of an mRNA template during a 60 minute cDNA synthesis reaction.

Claim 48 (new): A composition, comprising cDNA of which at least 34% is full length, produced by a process comprising

mixing an mRNA template with an M-MLV reverse transcriptase having DNA polymerase activity, wherein said reverse transcriptase has no detectable RNase H activity as determined by examining by gel electrophoresis the integrity of an mRNA template during a one minute cDNA synthesis reaction; and

incubating said mixture under conditions sufficient to make said cDNA complementary to said mRNA template.

Claim 49 (new): The composition of claim 48, wherein said reverse transcriptase is modified within the RNase H domain.

Claim 50 (new): The composition of claim 48, wherein said reverse transcriptase is encoded by a modified nucleotide sequence that encodes a modified amino acid sequence modified in the region corresponding to amino acids 498-611 of M-MLV reverse transcriptase.

Claim 51 (new): The composition of claim 48, wherein said reverse transcriptase is encoded by a modified nucleotide sequence that encodes a modified amino acid sequence

modified in the region corresponding to amino acids 503-611 of M-MLV reverse transcriptase.

Claim 52 (new): The composition of claim 48, wherein said no detectable RNase H activity is determined by examining by gel electrophoresis the integrity of an mRNA template during a 5 minute cDNA synthesis reaction.

Claim 53 (new): The composition of claim 48, wherein said no detectable RNase H activity is determined by examining by gel electrophoresis the integrity of an mRNA template during a 10 minute cDNA synthesis reaction.

Claim 54 (new): The composition of claim 48, wherein said no detectable RNase H activity is determined by examining by gel electrophoresis the integrity of an mRNA template during a 30 minute cDNA synthesis reaction.

Claim 55 (new): The composition of claim 48, wherein said no detectable RNase H activity is determined by examining by gel electrophoresis the integrity of an mRNA template during a 60 minute cDNA synthesis reaction.

Claim 56 (new): A composition, comprising cDNA of which at least 34% is full length, produced by a process comprising

mixing an mRNA template with a retroviral reverse transcriptase having DNA polymerase activity and 0.23×10^3 Units/mg or less of RNase H activity; and

incubating said mixture under conditions sufficient to make said cDNA complementary to said mRNA template.

Claim 57 (new): The composition of claim 56, wherein said reverse transcriptase is modified within the RNase H domain.

Claim 58 (new): The composition of claim 56, wherein said reverse transcriptase is encoded by a modified nucleotide sequence that encodes a modified amino acid sequence modified in the region corresponding to amino acids 498-611 of M-MLV reverse transcriptase.

Claim 59 (new): The composition of claim 56, wherein said reverse transcriptase is encoded by a modified nucleotide sequence that encodes a modified amino acid sequence modified in the region corresponding to amino acids 503-611 of M-MLV reverse transcriptase.

Claim 60 (new): The composition of claim 56, wherein said reverse transcriptase has 0.1×10^3 Units/mg or less of RNase H activity.

Claim 61 (new): The composition of claim 56, wherein said reverse transcriptase has 0.01×10^3 Units/mg or less of RNase H activity.

Claim 62 (new): The composition of claim 56, wherein said DNA polymerase activity is at least 17.5 x 10^3 Units mg.

Claim 63 (new): The composition of claim 56, wherein said DNA polymerase activity is at least 81 x 10^3 Units/mg.

Claim 64 (new): A composition, comprising cDNA of which at least 34% is full length, produced by a process comprising

mixing an mRNA template with an M-MLV reverse transcriptase having DNA polymerase activity and 0.23 x 10^3 Units/mg or less of RNase H activity; and

incubating said mixture under conditions sufficient to make said cDNA complementary to said mRNA template.

Claim 65 (new): The composition of claim 64, wherein said reverse transcriptase is modified within the RNase H domain.

Claim 66 (new): The composition of claim 64, wherein said reverse transcriptase is encoded by a modified nucleotide sequence that encodes a modified amino acid sequence modified in the region corresponding to amino acids 498-611 of M-MLV reverse transcriptase.

Claim 67 (new): The composition of claim 64, wherein said reverse transcriptase is encoded by a modified nucleotide sequence that encodes a modified amino acid sequence

modified in the region corresponding to amino acids 503-611 of M-MLV reverse transcriptase.

Claim 68 (new): The composition of claim 64, wherein said reverse transcriptase has 0.1 x 10^3 Units/mg or less of RNase H activity.

Claim 69 (new): The composition of claim 64, wherein said reverse transcriptase has 0.01 x 10^3 Units/mg or less of RNase H activity.

Claim 70 (new): The composition of claim 64, wherein said DNA polymerase activity is at least 17.5 x 10^3 Units/mg.

Claim 71 (new): The composition of claim 64, wherein said DNA polymerase activity is at least 81 x 10^3 Units/mg.

Claim 72 (new): The composition of any one of claims 24-71, wherein at least 50% of the cDNA is full length.

Claim 73 (new): A composition, comprising cDNA of which at least 34% is full length.

Claim 74 (new): A composition, comprising cDNA of which at least 50% is full length.

Claim 75 (new): A composition, comprising cDNA of which the amount of full length cDNA is at least 42% greater than the amount of full length cDNA that can be synthesized by a reverse transcriptase that has not been modified within the RNase H domain.